

**BY ORDER OF THE COMMANDER  
ELLSWORTH AFB**

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**6 MAY 2014**

**Maintenance**



**CRASHED DAMAGED DISABLED  
AIRCRAFT RECOVERY (CDDAR) PROGRAM**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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The purpose of this instruction is to establish local procedures required to implement the CDDAR program In Accordance With (IAW) AFI 21-101, *Aircraft and Equipment Maintenance Management*. This instruction applies to all 28th Bomb Wing (28 BW) military and civilian personnel located at Ellsworth Air Force Base (EAFB), SD. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Send comments and suggested changes to this supplement through channels, using AF Form 847, *Recommendation for Change of Publication*, to 28 MXS/MXM, 1750 Bergstrom Dr, Ellsworth AFB, SD 57706.

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**1. CDDAR RESPONSIBILITIES:** The organizations listed below are assigned the following responsibilities during a CDDAR response, as required: **WARNING:** Prior to any crash recovery operation, ensure that it is safe to approach the aircraft. Ensure all explosives, ejection seats, cartridges and flares are de-armed, expended, or proclaimed safe by the fire department and (or) Explosive Ordnance Disposal (EOD.) Also, ensure all hazardous material situations are secured prior to starting any crash recovery operation.

**1.1. 28 BW.**

**1.1.1. 28 Bomb Wing Command Post (28 BW/CP):**

1.1.1.1. Notify the 28th Bomb Wing Vice Commander and all acting group commanders. The 28 BW/CP will activate the Crisis Action Team (CAT) and/or Emergency Operations Center (EOC) recall, as directed by the 28th Bomb Wing Commander. Prepare and submit accurate and timely OPREP-3 reporting IAW AFI 10-206, *Operational Reporting*.

1.1.1.2. Maintain command and control of 28 BW responding assets through coordination with the Incident Commander (IC) and the EOC.

1.1.1.2.1. The IC is designated IAW with the qualifications listed in AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*.

**1.1.2. The 28th Bomb Wing Public Affairs (28 BW/PA) will stand up and effectively operate a Media Operations Center.**

1.1.2.1. If situation warrants, ensure MAJCOM/PA involvement and stand up a Joint Information Center.

**1.1.3. 28th Bomb Wing Safety Office (28 BW/SE) will initiate safety and aircraft investigation requirements IAW AFI 91-204, *Safety Investigations and Reports* and will coordinate with the IC and CDDAR Team Chief during the recovery operation.**

**1.2. 28th Operations Group (28 OG).**

**1.2.1. 28th Operations Support Squadron (28 OG/OSS):**

1.2.1.1. 28th Operations Support Squadron Airfield Operations Flight (28 OSS/OSA):

1.2.1.1.1. Airfield Management (AMOps) will notify the 28th BW/CP, 28th Maintenance Group Maintenance Operations Center (28 MXG/MOC), 28th Security Forces Squadron (28 SFS), Emergency Management, EOD, and 28 BW/SE via the Secondary Crash Net (SCN) that an incident has occurred that requires a CDDAR response. AMOps will also publish an applicable "Notice to Airmen" (NOTAM.)

1.2.1.1.2. Air Traffic Control Tower: Will notify all aircraft within the airfield vicinity of applicable restrictions to flight operations. Tower will also update ATIS.

### 1.3. 28th Maintenance Group (28 MXG).

1.3.1. The 28th Maintenance Group Commander (28 MXG/CC) is responsible for the Base Crash Recovery Program and ensures a support plan is developed which establishes unit crash recovery capabilities. Provides personnel required for CDDAR operations.

1.3.1.1. Personnel and mandatory positions required to do a complete aircraft lift for a disabled aircraft are listed in Table 1.1.

**Table 1.1. Personnel/Mandatory Positions to Lift Disabled Aircraft Position**

<b>Personnel/Mandatory Positions to Lift Disabled Aircraft Position</b>	<b>Number of Personnel Required</b>
Crash Recovery Team Chief	1
Manifold operations	8
Shore line monitor	4-8 (Old-New)
Plumb bob observer	1

**Table 1.2. Personnel required to tow recoverable aircraft from soft surface are listed in [Table 1.2](#).**

<b>Personnel Required to Tow Recoverable Aircraft from Soft Surface</b>	<b>Number of Personnel Required</b>
Crash Recovery Team Chief	1
Aircraft tow supervisor	1
Tow vehicle operator	1-3
Aircraft brake operator	1
Wing and tail walker	3
Chalk Walker	2

1.3.2. The 28 MXG/MOC will initiate a recall through Mike Super.

1.3.2.1. The 28 MXG/MOC will provide the CDDAR team with all available information such as: aircraft type, location, fuel load, and munitions configuration.

1.3.2.2. The CDDAR Team Chief will notify 28th Logistic Readiness Squadron Vehicle Dispatch Section (28 LRS/LGRDDO) and inform them of any vehicle/support requirements. 28 LRS/LGRDDO will immediately dispatch a tractor and driver to Dock 72 and attach it to the 40-foot crash recovery trailer.

1.3.3. Equipment and materials listed in this regulation should be on hand or requisitioned from outside sources to expedite aircraft recovery operations.

1.3.4. Recovery operations will not proceed while an aircraft is being investigated by a safety/aircraft investigating board unless released by the board president in accordance with AFI 91-204. Personnel not engaged in the investigation will remain outside of the area. The CDDAR team may be called upon to perform tasks as required by the investigation board.

1.3.5. All units should accomplish requirements of AFMAN 10-2502, *Air Force Incident Management System Standards and Procedures* and keep procedures in place until no longer required as determined by IC and CDDAR Team Chief. Requirements may need to be in place from a few hours to several weeks depending on the situation.

1.3.6. 28th Maintenance Squadron (28 MXS):

1.3.6.1. 28th Maintenance Squadron Maintenance Flight (28 MXS/MXMM). The 28 MXS/MXMM is responsible for the recovery of crashed, damaged, or disabled aircraft on or off base within the EAFB area of responsibility.

1.3.6.2. 28th Maintenance Squadron Repair and Reclamation (28 MXS/MXMMR) Section will ensure compliance with CDDAR program responsibilities. The Noncommissioned Officer in Charge of 28 MXS/MXMMR Section or appointed designee will serve as the CDDAR Team Chief. See [Attachment 2](#) for the necessary team chief training requirements.

1.3.6.2.1. Personnel required for CDDAR team: one team chief and seven team members from 28 MXS/MXMMR. Various other members as determined to be necessary by the IC. See [Attachment 3](#) for the necessary team member training requirements.

1.3.6.3. 28th Maintenance Squadron Aerospace Ground Equipment Flight will provide the Aerospace Ground Equipment (AGE) listed in Paragraph 3.5., as required.

1.3.6.3.1. Provide an 28 MXS/MXMG technician to maintain and operate powered during recovery operations.

1.3.6.4. 28th Maintenance Squadron Egress Section (28 MXS/MXMAG) will provide fully-qualified 28 MXS/MXMAG technicians to safe aircraft egress components when requested by CDDAR Team Chief.

1.3.7. 28th Aircraft Maintenance Squadron. The owning Aircraft Maintenance Unit of the mishap aircraft will be responsible for supplying qualified maintenance personnel to assist in recovery operations. NOTE: Personnel will be trained to the minimum level required to perform crash recovery/removal procedures by attending an initial hands-on crash recovery course at Military Training Flight. If there is a question of applicability, the 28th Aircraft Maintenance Squadron Lead Production Superintendent will work closely with the CDDAR Team Chief to resolve any issues. The CDDAR Team Chief will make the final decision. See [Attachment 4](#) for the necessary augmentee team member training requirements.

1.3.7.1. Provide towing equipment and operators for removing assigned and transient disabled/crashed aircraft from the runway as directed by the IC and CDDAR Team Chief.

1.3.7.2. 28th Aircraft Maintenance Squadron Specialist Element will provide specialists for removal/recovery of aircraft engines as directed by the IC and CDDAR Team Chief.

1.3.7.3. 28th Aircraft Maintenance Squadron Weapons Element will safe and/or download munitions from the mishap aircraft as directed by the IC and CDDAR Team Chief. If required, 28 MXG/MOC will request EOD support from EAFB.

1.3.7.4. 28th Maintenance Squadron Avionics Element will remove and secure all classified components from the mishap aircraft as directed by the IC and CDDAR Team Chief.

#### **1.4. 28th Mission Support Group:**

1.4.1. 28th Security Forces Squadron (28 SFS). The 28th Security Forces Squadron Base Defense Operation Center will ensure the timely dissemination of pertinent information to the appropriate agencies and post/patrols, as well as provide command and control over the responding posts/patrols IAW EAFBI 31-101, *Installation Security Instruction*. They will also ensure the expedient set-up and maintenance of security at the scene by initial responding patrols and Traffic Control Points (TCP.) They are also responsible for effective crowd control during a major accident response and controlling access to the recovery site via the personnel access list obtained from the IC and CDDAR Team Chief.

1.4.2. 28th Civil Engineer Squadron Fire and Emergency Services Flight (28 CES/CEF) will perform IC duties until relieved per EAFB 28 CES/CEF Standard Operating Procedures (SOP) and Incident Command checklists using Air Force Incident Management System (AFIMS) terminology. IC will request agencies and response forces from the EOC as necessary to provide for safety, incident stabilization, and property conservation. 28 CES/CEF shall provide a standby vehicle for the duration of the removal operation.

1.4.2.1. EOD. The EOD Team Chief will assess collateral damage and direct the use and performance of EOD incident/tool procedures by EOD team members.

1.4.2.2. 28th Civil Engineer Squadron will provide supplies, equipment, and operators to build a stable jacking foundation and/or adequate towing surface for tow vehicles and aircraft (i.e. rapid runway).

1.4.2.3. 28th Civil Engineer Squadron Programs Flight will assess soil condition to include firmness, condition, slope of terrain, and supporting strength to determine the most practical method of lifting or towing.

1.4.3. 28th Logistics Readiness Squadron Vehicle Management Flight (28 LRS/LGRV). The 28 LRS/LGRV will provide the vehicles listed in Paragraph 3.7.

1.4.4. If any other vehicles are required by the IC, the IC will request those vehicles through the EOC. If the 28 LRS/LGRV cannot provide the required vehicles and operators,

they will be leased from local suppliers. Lease agreements will be established for the two 60 ton cranes and crane operators.

1.4.4.1. If required, provide a 28th Logistics Readiness Squadron Fuels Management (28 LRS/LGRF) Laboratory technician to test fuel samples from the mishap aircraft.

#### **1.5. 28th Medical Group:**

1.5.1. The 28th Medical Operations Squadron Bioenvironmental Engineering Flight (28 MDOS/SGPB) will be consulted and directly involved in determining personnel health hazards, training requirements and appropriate levels of used Personnel Protective Equipment (PPE). Examples of required PPE may include (but are not limited to) Tyvek suits, Turtleskin gloves, and respirators with filters.

#### **1.6. Transient Aircraft.**

1.6.1. Because the 28 BW is used as a transit by aircraft from various branches of the DoD and Strategic Arms Reduction Treaty inspection teams it may be tasked for CDDAR response (in whole or in part) following an incident/accident involving a host of different aircraft types. In such cases, the responsibilities of the IC and base emergency response agencies are unchanged, but the situation may require outside agency expertise to ensure overall safety of personnel and equipment. All base agencies will perform only those duties that they are trained and equipped for. Any assistance provided outside the scope of the normal response requires that the owning base/organization be contacted to gain appropriate work force, information, training, equipment, and /or clearance before actions can take place. CDDAR support for transient aircraft will be evaluated by aircraft Mission Design Series (MDS), considering technical expertise, technical data, MDS-unique tools/special equipment, and airframe/system familiarization; support will be provided if possible. Support is not authorized for Geographically Separated Units.

#### **1.7. Host and Tenant Base CDDAR responsibilities.**

1.7.1. Host/Tenant Base CDDAR responsibilities will be referenced through EAFB Comprehensive Emergency Management Plan (CEMP)10-2.

1.7.2. A comprehensive list of available assets will be maintained and made available to the host base for utilization at all times.

1.7.2.1. Technical expertise, technical data, MDS-unique tools/special equipment, airframe/system familiarization will be made available to the host base.

1.7.3. The CDDAR Team Chief will conduct periodic CDDAR response exercises to maintain current training and knowledge for all team members.

## **2. EQUIPMENT, TOOLS, VEHICLES AND OTHER/SUPPLIES**

2.1. CDDAR equipment, vehicles, tools, and other supplies/consumables are specified in Chapter 3. Additional equipment, vehicles, tools, and other supplies/consumables requested by the CDDAR Team Chief, or appointed designee, will be assembled in the area immediately in front of Dock 72 or designated assembly area.

2.2. Inspect all recovery equipment for serviceability before and after each exercise and real world use. Periodic equipment inspections must be accomplished IAW intervals established in technical orders or as a minimum annually. Document inspections and maintenance on

AFTO Forms 244, *Industrial/Support Equipment Record* and in Tool Accountability System (TAS) as required. Proper Intermediate Maintenance Data System (IMDS) Job Control Number will be utilized for each equipment inspection. Ensure sling/cable inspections are documented on each AFTO IMT 95, *Significant Historical Data* and proof load test documentation remains on hand. Ensure that all pieces of equipment are tagged with a DD Form 1574, *Serviceable Tag-Material* (yellow serviceable tag) indicating pre-use and post use inspections.

2.3. The CDDAR Team Chief will ensure weather proof storage for equipment, tools, composite containment equipment and other supplies is provided to ensure equipment serviceability and accessibility.

2.4. A current list of PPE required to perform recovery of an aircraft containing composite/hazardous material as established by technical data will be maintained by the CDDAR Team Chief and are specified in Paragraph 6.6.3.

2.5. 28 MXS/MXMG will provide the following equipment for 24 hour operations:

- 2.5.1. Flood light trailer mounted, FL-1D (4 ea).
- 2.5.2. Compressor, rotary, air diesel engine driven, MC-2A.
- 2.5.3. Compressor, air, diesel engine driven, MC-7 (4 ea).
- 2.5.4. Dolly, disable wheel, 32,000 lbs.
- 2.5.5. Aircraft Tow Bar.
- 2.5.6. Aircraft jacks.

2.6. 28th Maintenance Squadron Maintenance Flight (28 MXS/MXMM) will provide the following equipment for 24 hour operations:

- 2.6.1. Suitable CDDAR trailer, (storage and transportation of recovery equipment).
- 2.6.2. Pneumatic air bags to include pneumatic hoses and operation console.
- 2.6.3. Recovery slings, snatch cables, debog slings, chains, shackles, PPE, miscellaneous tools, safety cones, felt padding, rope, barrel dolly, shovels, pry bars, block and tackle, etc.
- 2.6.4. Duct Tape, (Consumable).
- 2.6.5. Fixant Material, (Consumable).
- 2.6.6. 0.006 inch thick plastic, (Consumable).
- 2.6.7. Fixant Spray Bottle, (Consumable).
- 2.6.8. Any other equipment required by the 28th Maintenance Squadron Repair and Reclamation (28 MXS/MXMMR) Industrial Hygiene Survey.

2.7. The following equipment will be provided/contracted for and operate by 28 LRS/LGRV and operated by designated unit. Equipment will be available 24 hours a day during CDDAR recovery operations. If they cannot provide the items or vehicle operator, it will be obtained by other means.

- 2.7.1. Crane, 2ea 60K and 1ea 15K (Special Vehicle).



- 2.7.2. 40-Foot flatbed trailer and tractor (Special Vehicle).
- 2.7.3. 8-Passenger van.
- 2.7.4. 29-Passenger bus (Special Vehicle).
- 2.7.5. Tractor able to pull CDDAR equipment trailer.
- 2.7.6. All-terrain forklift.
- 2.7.7. Bulldozer, 3ea 60K or 2ea 90K draw bar pull rating (Special vehicle and operator required).
- 2.7.8. Aircraft Tow Vehicle.
- 2.7.9. Defuel truck.

2.8. The following equipment will be provided/contracted for by 28 CES:

- 2.8.1. 100 sandbags; sufficient sand must be available to fill sandbags (Consumable).
- 2.8.2. 75 A/N 2 portable runway matting sheets (Consumable).
- 2.8.3. 300 timbers, railroad ties 6" x 8" x 8" (Consumable).
- 2.8.4. Two water pumps, or sumps, capable of 50 to 100 gallons per minute to drain ditches/evacuation area where aircraft jacks/air bags are placed.

### **3. CDDAR SUPPORT FOR DEPLOYED OPERATIONS**

- 3.1. CDDAR support for deployed operations will vary. Requirement for each operation will be evaluated by the 28 MXG/CC and CDDAR Team Chief. Assets available at the deployed location will be taken into consideration and utilized when feasible.
- 3.2. 28 MXG/CC is responsible for ensuring sufficient equipment is available for mobility/deployed operations, as authorized in the applicable allowance standards.

### **4. SUPPORT FOR CDDAR CORE HOURS/AFTER HOURS**

- 4.1. CDDAR support during flying hours will require immediate response by all CDDAR team members. 28 MXG/MOC will initiate then recall roster by notifying the on-duty Mike Super. This process will begin the recall roster notifying the appropriate 28 MXG personnel and CDDAR Team Chief.
- 4.2. When an afterhours CDDAR recovery crew is required, 28 BW/CP will contact personnel through the Emergency Notification List. They will then notify the stand-by Mike Super. The Mike Super will continue with the recall roster.
  - 4.2.1. An emergency recall roster will be kept by the CDDAR Team. If required, the 28 BW/CP will provide emergency contact information to the CDDAR Team Chief.
  - 4.2.2. Team members will notify the CDDAR Team Chief when their contact information changes to ensure continuity of the recall roster.
- 4.3. CDDAR team members will assemble in at Dock 72 or designated assembly area along with any additional personnel requested by the CDDAR Team Chief.

## 5. CDDAR TEAM CHIEF RESPONSIBILITIES

5.1. 28 MXG/CC will utilize the 28 MXS/MXMMR Section CDDAR Team Chief to establish a CDDAR program and will be the Point Of Contact for the wing CDDAR instruction.

5.2. Team chief will work closely with the 28th Maintenance Operations Squadron Maintenance Training Flight to establish course control documents for crash recovery training.

5.3. Team chief along with the 28 MXS/MXMM supervision will review support agreements and base disaster response plans annually.

5.4. Team chief will ensure that CDDAR procedures are coordinated with the 28 CES/CEF, 28 BW/SE, 28 CES, EOD, 28 SFS, 28 MDOS/SGPB, 28th Operation Support Squadron Airfield Manager (28 OSS/OSAA), and on/off base agencies. Reference AFMAN 10-2502 and EAFB CEMP 10-2.

5.4.1. Team chief will maintain control of the crash site under the supervision of the IC once the Safety/Accident Investigation Board President releases the aircraft.

5.4.1.1. Place CDDAR team personnel on the recovery site personnel access list. Personnel requiring access to the recovery site will coordinate their need to access the area with the IC and provide the required information for the access list.

5.4.2. Team chief will meet with the IC to develop a recovery plan. The team chief will carry out the recovery plan under the direction of IC.

5.4.3. Team chief will request assistance for transient aircraft beyond our capabilities from the aircraft owning unit through the IC.

5.5. Team chief will inform the 28 MXG/CC in writing of equipment shortages/serviceability that precludes CDDAR support. The MXG/CC will also be informed in writing of equipment storage shortfalls.

5.6. 28 MXS/MXMMR CDDAR Team Chief will ensure sufficient personnel/teams are trained to support CDDAR operations. This includes:

5.6.1. Team chief will be certified IAW AFI 21-101 and placed on the Special Certification Roster as CDDAR Team Chief.

5.6.2. Familiarization with/training on any unique characteristics/hazards/material for assigned aircraft (i.e., B-1 aircraft composite material, hot brakes, hot gun, munitions, etc.) and document training in the Training Business Area (TBA).

5.6.3. Proper use of PPE as determined by technical data. Reference TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services)*.

5.6.3.1. Long Cuffed Leather Gloves, (Consumable).

5.6.3.2. Hard Sole Steel Toe Boots.

5.6.3.3. Eye Protection.

5.6.3.4. Hard Hat with Ear Muffs.

5.6.3.5. Other equipment as required/requested by the CDDAR Team Chief.

5.6.4. Trained/qualified/certified on all support equipment. Ensure qualifications for personnel are identified and documented. Core Tasks for CDDAR team members are identified in Paragraphs 2.2.6.2. through 2.2.6.2.1. and Paragraph 2.2.7.

5.6.5. The team chief will ensure the CDDAR team participates in an annual Major Accident Response Exercise (MARE) as outlined in AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*. CDDAR procedures will be coordinated annually as a minimum with host base units. Participating in and organizing a MARE will ensure communication between 28 CES/CEF, 28 BW/SE, 28 CES, EOD, 28 SFS, 28 MDOS/SGPB, 28 OSS/OSAA, and on/ off base agencies.

5.7. The CDDAR Team Chief will ensure adequate tools and support equipment for recovery are serviceable and available. The team chief will also maintain a list of all CDDAR tools and equipment. Reference Master CTK Inventory folder for most current CDDAR MIL.

5.8. The CDDAR Team Chief will coordinate with 28th Bomb Wing Quality Assurance weight and balance manager when aircraft weight and center of gravity (CG) conditions are unknown.

## 6. CDDAR TEAM MEMBER QUALIFICATIONS

6.1. All team members will be trained in recovery procedures according to the course control documents and unit-developed-training guide (28 BW CDDAR Program, CDDAR Lesson Plan), with special emphasis placed on equipment operation and Core Tasks. These documents and training guide will be established by the team chief and Maintenance Training Flight. Reference 28 BW CDDAR course control document and 28 CDDAR training guide located in the 28 MXS/MXMMR Section master training plan, TBA.

6.1.1. All team members will be a minimum 5-level in their PAFSC.

6.1.2. Team members will receive initial training (academic and hands-on) and ensure that all training is documented in the TBA and IMDS.

6.1.3. Team members should lift an aircraft (when possible) to complete initial training requirements.

6.1.4. All team members should participate in an aircraft lift exercise once every three years and ensure all training is documented.

6.1.5. All team members will receive annual training following initial training consisting of academic and hands-on. All training will be documented in TBA and IMDS.

6.1.5.1. AF Form 55, *Employee Safety and Health Record* Training CDDAR INITIAL/ANNUAL BRIEF.

6.1.5.1.1. CDDAR lesson plan, General Information.

6.1.5.1.2. CDDAR Job Safety Training Outline.

6.1.5.1.3. Aircraft Emergency Response Information.

6.1.5.1.4. Response Guidance for Advanced Aerospace Material Equipment.

6.1.5.2. Shackles, block and tackle, chains etc.

- 6.1.5.3. Pneumatic console and lifting bag hoses.
- 6.1.5.4. Proper use of felt pad.
- 6.1.5.5. Proper alignment of bags under aircraft.
- 6.1.5.6. Proper use of bag dunnage.
- 6.1.5.7. Various techniques.
- 6.1.5.8. MLG strut emergency towing with towlines.
- 6.1.5.9. Emergency towing with disabled wheel dolly, (installation, usage, and removal).
- 6.1.5.10. Tug drivers documented on SCR.
- 6.1.5.11. Training must be tracked on SCR.
- 6.1.5.12. Flood light, FL-1D.
- 6.1.5.13. Compressor, rotary, MC-2A.
- 6.1.5.14. Compressor, air, MC-7.

## **7. DUTIES OF THE CDDAR TEAM**

- 7.1. Once alerted, the CDDAR team will assemble at Dock 72 or designated assembly area. The CDDAR team chief will, at that time, ensure radio communications are established with the 28 MXG/MOC.
- 7.2. Once assembled and ready the CDDAR Team Chief will notify the 28 MXG/MOC, and determine the number of personnel and what specialties are needed.
- 7.3. When clearance is needed to operate on, or to cross, an active runway the 28 MXG/MOC will query the Supervisor of Flying for appropriate clearances. The CDDAR team and associated equipment operators will remain clear of all runways until appropriate clearances have been given.
- 7.4. The IC will release the aircraft for maintenance, when aircraft is safe for the recovery team to approach. Once all fires have been extinguished only the minimum safe-ing switches (ejection seats, weapons panels) should be safed. All actions need to be documented to preserve evidence. The Safety Board President or Accident Board President will release the aircraft to the IC who will then allow the CDDAR team to render any further any aircraft safing procedures if required.
- 7.5. When the aircraft has departed the runway area, if possible, tow the aircraft back onto the runway/taxiway, exercising caution with regard to power setting of the tow vehicle.

JEFFREY B. TALIAFERRO, Colonel, USAF  
Commander, 28th Bomb Wing

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 10-206, *Operational Reporting*, 6 Sep 2011

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, 24 Jan 2007

AFI 13-213, *Airfield Management*, 1 Jun 2011

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 Jul 2010

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, 26 Jan 2012

AFI 31-203, *Security Forces Management Information System (SFMIS)*, 26 Jan 2012

AFI 91-204, *Safety Investigations and Reports*, 24 Sep 2008

AFMAN 10-2502, *Air Force Incident Management System (AFIMS) Standards and Procedures*, 25 Sep 2009

AFMAN 24-204, *Preparing Hazardous Materials for Military Air Shipments*, 1 Sep 2009

AFMAN 33-363, *Management of Records*, 1 Mar 2008

AFMAN 91-223, *Aviation Safety Investigations and Reports*, 6 Jul 2004

AFOSHSTD 91-100, *Aircraft Flight Line-Ground Operations and Activities*, 1 May 1998, IC1 23 Mar 2011

AFOSHSTD 48-137, *Respiratory Protection Program*, 10 Feb 2005

AFOSHSTD 48-20, *Occupational Noise and Hearing Conversation Program*, 10 Feb 2005

DoDI 6055.6, *DoD Fire and Emergency Services (F&ES) Program*, 21 Dec 2006

**Adopted Forms**

AF Form 55, *Employee Safety and Health Record*

AF Form 847, *Recommendation for Change of Publication*

AFTO Forms 244, *Industrial/Support Equipment Record*

AFTO IMT 95, *Significant Historical Data*

DD Form 1574, *Serviceable Tag-Material*

***Abbreviations and Acronyms***

**28 BW**—28th Bomb Wing

**28 BW/CP**—28th Bomb Wing Command Post

**28 BW/PA**—28th Bomb Wing Public Affairs

**28 BW/SE**—28th Bomb Wing Safety Office

**28 OG**—28th Operations Group

**28 OSS**—28th Operations Support Squadron  
**28 OSS/OSA**—28th Operations Support Airfield Operations Flight  
**28 CES**—28th Civil Engineer Squadron  
**28 CES/CEF**—28th Civil Engineer Squadron Fire and Emergency Services  
**28 LRS/LGRF**—28th Logistics Readiness Squadron Fuels Management  
**28 LRS/ LGRV**—28th Logistics Readiness Squadron Vehicle Management Flight  
**28 LRS/LGRDDO**—28th Logistic Readiness Squadron Vehicle Dispatch Section  
**28 MDOS/SGPB**—28th Medical Operations Squadron Bioenvironmental Engineering  
**28 MXG**—28th Maintenance Group  
**28 MXG/CC**—28th Maintenance Group Commander  
**28 MXG/MOC**—28th Maintenance Group Maintenance Operations Center  
**28 MXS/MXMAG**—28th Maintenance Squadron Egress Section  
**28 MXS/MXMM**—28th Maintenance Squadron Maintenance Flight  
**28 MXS/MXMMR**—28th Maintenance Squadron Repair and Reclamation  
**28 SFS**—28th Security Forces Squadron  
**AGE**—Aerospace Ground Equipment  
**CDDAR**—Crashed Damaged Disabled Air craft Recovery  
**CEMP**—Comprehensive Emergency Management Plan  
**EOC**—Emergency Operations Group  
**EAFB**—Ellsworth Air Force Base  
**EOD**—Explosive Ordnance Disposal  
**IAW**—In Accordance With  
**IC**—Incident Commander  
**IMDS**—Intermediate Maintenance Data System  
**MARE**—Major Accident Response Exercise  
**MDS**—Mission Design Series  
**NOTAM**—Notice to Airmen  
**PPE**—Personnel Protective Equipment  
**SCN**—Secondary Crash Net

## Attachment 2

## CDDAR TEAM CHIEF TRAINING

Figure 2.1. Team Chief Training

CFETP - 2A5X1-001 - 001.001.001.004.005	Crash recovery TR: TOs GE07/2AAKP-502, 1B-1B-2-07GS-00-1
WJQS - 54928 - 001.010.001	Crash Recovery Operation-TEAM MEMBER TR: Crash Recovery Lesson Plan
WJQS - 54928 - 001.010.002	Crash Recovery Operation-TEAM LEADER TR: Crash Recovery Lesson Plan
WJQS - 54928 - 001.010.003	Crash Recovery Safety, Warnings, Cautions, and Hazards TR: 07-00-01, 00-105E-9, and AFMAN 10-2502
WJQS - 54928 - 001.010.004	Crash Recovery Air Bag Pre-use Inspection and Operation TR: 35D-5-3-11
WJQS - 54928 - 001.010.005	Crash Recovery Air Manifold-Operation TR: Local Checklist Procedures & Factory Manual
WJQS - 54928 - 001.010.006	Crash Recovery Block, Tackle, and Grip hoist-Operation TR: Local Checklist Procedures & Factory Manual
WJQS - 54928 - 001.010.007	Crash Recovery MC-7 Compressor-Operation TR: 34Y1-244-4
CFETP - 2A5X1-001 - 001.001.001.006	Safe aircraft for maintenance TR: TO 1B-1B-2-05JG-20-1

CFETP - 2A5X1-001 - 001.001.001.004.004.001	Jacking team member
CFETP - 2A5X1-001 - 001.001.001.004.004.002	Jacking supervisor
CFETP - 2A5X1-001 - 001.001.001.004.004.003	Operate jacking manifold



## Attachment 3

## CDDAR TEAM MEMBER TRAINING

Figure 3.1. Team Member Training

WJQS - 54928 - 001.010.001	Crash Recovery Operation-TEAM MEMBER TR: Crash Recovery Lesson Plan
WJQS - 54928 - 001.010.003	Crash Recovery Safety, Warnings, Cautions, and Hazards TR: 07-00-01, 00-105E-9 and AFMAN 10-2502
WJQS - 54928 - 001.010.004	Crash Recovery Air Bag Pre-use Inspection and Operation TR: 35D-5-3-11
WJQS - 54928 - 001.010.005	Crash Recovery Air Manifold-Operation TR: Local Checklist Procedures & Factory Manual
WJQS - 54928 - 001.010.006	Crash Recovery Block, Tackle, and Grip hoist-Operation TR: Local Checklist Procedures & Factory Manual
WJQS - 54928 - 001.010.007	Crash Recovery MC-7 Compressor-Operation TR: 34Y1-244-4
CFETP - 2A5X1-001- 001.001.001.004.005	Crash recovery TR: TOs GE07/2AAKP-502, 1B-1B-2-07GS-00-1
CFETP - 2A5X1-001 - 001.001.001.006	Safe aircraft for maintenance TR: TO 1B-1B-2-05JG-20-1
CFETP - 2A5X1-001 - 001.001.001.004.004.001	Jacking team member
CFETP - 2A5X1-001 -	Operate jacking manifold

## Attachment 4

## AUGMENTEE CDDAR TEAM MEMBER TRAINING

Figure 4.1. Augmentee Team Member Training

CFETP - 2A5X1-000 - 001.001.011.003	Safe aircraft for maintenance
CFETP - 2A5X1-001 - 001.001.001.004.003.001	Wing/tail walker
CFETP - 2A5X1-001 - 001.001.001.004.003.002	Brake operator
CFETP - 2A5X1-001 - 001.001.001.004.003.003	Tow team supervisor
CFETP - 2A5X1-001 - 001.001.001.004.004.001	Jacking team member
CFETP - 2A5X1-001 - 001.001.001.004.005	Crash recovery TR: TOs GE07/2AAKP-502, 1B-1B-2-07GS-00-1
CFETP - 2A5X1-001 - 001.001.001.006	Safe aircraft for maintenance TR: TO 1B-1B-2-05JG-20-1
WJQS - 54928 - 001.010.001	Crash Recovery Operation-TEAM MEMBER TR: Crash Recovery Lesson Plan
WJQS - 54928 - 001.010.003	Crash Recovery Safety, Warnings, Cautions, and Hazards TR: 07-00-01, 00-105E-9, and AFMAN 10-2502
WJQS - 54928 - 001.010.004	Crash Recovery Air Bag Pre-use Inspection and Operation TR: 35D-5-3-11
WJQS - 54928 - 001.010.005	Crash Recovery Air Manifold-Operation TR: Local Checklist Procedures & Factory Manual

WJQS - 54928 - 001.010.006	Crash Recovery Block, Tackle, and Grip hoist- Operation  TR: Local Checklist Procedures and Factory Manual
WJQS - 54928 - 001.010.007	Crash Recovery MC-7 Compressor-Operation  TR: 34Y1-244-4